

IN THE CLAIMS

1. (Currently Amended) A rectangular microwave applicator arranged to operate at a predetermined frequency, and comprising a microwave enclosure forming a cavity having first and second transverse dimensions and a longitudinal dimension in the direction of propagation of microwave energy, ~~characterized in that~~ wherein said dimensions are such that a main power-transferring TEym1n mode with a long vertical wavelength is enhanced, and a significant amplitude of a complementary TEym2n mode is created, wherein m1, m2 and n are positive odd integers and m2 and n are both less or equal to m1-2.
2. (Original) A microwave applicator according to claim 1, further comprising corrugations or metal rods at the tunnel bottom in order to reduce the action and spread-out of LSM modes created by the TEym1n mode.
3. (Original) A microwave applicator according to claim 1, wherein a mode choke is achieved at the horizontal upper and lower planes of the tunnel ends by means of a horizontal elongated quarterwave slot provided in the vertical y-directed sidewall of the tunnel side, said mode choke being adapted to reduce the microwave leakage in the tunnel openings.
4. (Original) A microwave applicator according to claim 1, wherein the main power-transferring mode is a TEy31 mode, and the complementary mode is a TEy11 mode.
5. (Original) A microwave applicator according to claim 1, wherein the main power-transferring mode is a TEy71 mode, and the complementary mode is a TEy31 mode.

6. (Original) A microwave applicator according to claim 1, the applicator comprising two parallel feed slots in a top wall thereof connecting the microwave enclosure to a TE10 waveguide, and a metal post arranged at the waveguide centreline between the slots.

7. (Original) A microwave applicator according to claim 6, wherein width of the waveguide is about 86 mm, and the height of the waveguide is about 20-25 mm.

8. (Currently Amended) A. microwave applicator according to ~~claim 6 or 7, claim 6~~, wherein the horizontal dimensions of the metal post are 12 x 20 mm, and the height of said post is about 9-11 mm.

9. (Original) A microwave applicator according to claim 1, wherein the first and second dimensions of the cavity are 194x308 mm, and the longitudinal dimension is 140 mm, in order for the applicator to enhance the main power-transferring TEy31 mode and the complementary TEy11 mode at an operating frequency of 2450 MHz.

10. (Original) A microwave applicator according to claim 1, wherein the first and second dimensions of the cavity are 306x436 mm. End the longitudinal dimension is 140 mm, in order for the applicator to enhance the main power-transferring TEy71 mode and the complementary TEy31 mode at an operating frequency of 2450 MHz.